

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. **(Currently Amended)** A method comprising:
obtaining reference data that characterizes a media stream, said reference data including a mathematical transform of at least a portion of an image included in said media stream;
obtaining altered data that characterizes said media stream after said media stream has traversed a channel that includes a network, said altered data including a transform of the at least a portion of the image included in said media stream after said media stream has traversed said channel; [[and]]
determining a quality of service of said channel on the basis of a comparison of said reference data and said altered data;
obtaining network statistics associated with transmission on said channel; and
correlating said network statistics with said altered data.
2. **(Original)** The method of claim 1, wherein
said reference data characterizes a feature of said media stream; and
said altered data characterizes a feature of said media stream after said media stream has traversed said channel.
3. **(Original)** The method of claim 1, wherein obtaining at least one of said reference and said altered data comprises applying a Sarnoff JND algorithm or an ANSI T1.801.03 algorithm.
4. **(Currently Amended)** The method of claim 2, wherein determining [[a]] the quality of service of said channel comprises comparing said reference data and said altered data.

5. (Canceled)

6. (Currently Amended) The method of claim ~~[[5]]~~ **1**, further comprising selecting said network statistics from the group consisting of jitter, packet loss, and packet latency.

7. (Previously Presented) The method of claim **1**, further comprising selecting said channel to include:

- an encoder for creating an encoded representation of said media stream;
- a decoder for recovering said media stream from said encoded representation; and
- a computer network between said encoder and said decoder for transmitting said encoded representation between said encoder and said decoder.

8. (Original) The method of claim **1**, wherein obtaining said reference data comprises:

- passing said media stream through an encoder to generate an encoded signal;
- passing said encoded signal through a decoder to generate a decoded media stream; and
- passing said decoded media stream through a feature extractor to extract said reference data.

9. (Currently Amended) A system comprising:

- a first feature extractor for generating reference data characterizing a media stream, said reference data including a mathematical transform of at least a portion of an image included in said media stream;

- a second feature extractor for generating altered data characterizing said media stream after said media stream has traversed a channel that includes a network, said altered data including a transform of the at least a portion of the image included in said media stream after said media stream has traversed said channel; ~~[[and]]~~

- an analyzer for comparing said reference data and said altered data to generate a transmission metric indicative of a quality of service; and

a correlator in communication with said analyzer, said correlator being configured to correlate network statistics associated with said channel with said transmission metric.

10. (Canceled)

11. (Currently Amended) The system of claim ~~[[10]]~~ 9, further comprising a network monitor in communication with said correlator, said network monitor being configured to collect said network statistics.

12. (Currently Amended) The system of claim ~~[[10]]~~ 9, wherein said correlator is configured to correlate statistics selected from the group consisting of: jitter, packet loss, and packet latency.

13. (Currently Amended) The system of claim 9, wherein said first and second feature extractors are configured to extract media features using an algorithm selected from the group consisting of: ~~[[the]]~~ a Sarnoff JND algorithm and ~~[[the]]~~ an ANSI T1.801.03 algorithm

14. (Currently Amended) A computer-readable medium having software encoded thereon, said software comprising instructions for:

obtaining reference data that characterizes a media stream, said reference data including a mathematical transform of at least a portion of an image included in said media stream;

obtaining altered data that characterizes said media stream after said media stream has traversed a channel that includes a network, said altered data including a transform of the at least a portion of the image included in said media stream after said media stream has traversed said channel; ~~[[and]]~~

determining a quality of service of said channel on the basis of a comparison of said reference data and said altered data;

obtaining network statistics associated with transmission on said channel; and
correlating said network statistics with said altered data.

15. (Original) The computer-readable medium of claim 14, wherein said instructions for obtaining reference data include instructions for generating reference data characterizing a feature of said media stream; and

said instructions for obtaining altered data comprise instructions for generating altered data that characterizes a feature of said media stream after said media stream has traversed said channel.

16. (Original) The computer-readable medium of claim 14, wherein said instructions for obtaining at least one of said reference and said altered data comprise instructions for applying a Sarnoff JND algorithm or an ANSI T1.801.03 algorithm.

17. (Previously Presented) The computer-readable medium of claim 15, wherein said instructions for determining [[a]] the quality of service of said channel comprise instructions for comparing said reference data and said altered data.

18. (Canceled)

19. (Currently Amended) The computer-readable medium of claim [[18]] 14, wherein said software further comprises instructions for selecting said network statistics from the group consisting of jitter, packet loss, and packet latency.

20. (Previously Presented) The computer-readable medium of claim 14, wherein said software further comprises instructions for selecting said channel to include:
an encoder for creating an encoded representation of said media stream;
a decoder for recovering said media stream from said encoded representation; and
a computer network between said encoder and said decoder for transmitting said encoded representation between said encoder and said decoder.

21. (Original) The computer-readable medium of claim 14, wherein said instructions for obtaining said reference data comprise instructions for:

passing said media stream through an encoder to generate an encoded signal;
passing said encoded signal through a decoder to generate a decoded media stream; and
passing said decoded media stream through a feature extractor to extract said reference
data.